

# Exhibit 2

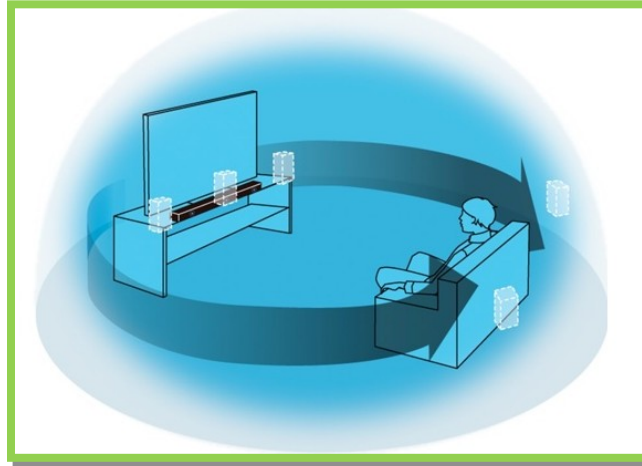
**Infringement Claim Chart for U.S. Pat. No. US7130430B2 v. Sony (“Defendant”)**  
 (See Accused Product List at end of chart for models)

| Claim 2   | Evidence  |
|---|---|
| <p>2. A speaker system for producing localized regions of sound comprising:</p> | <p>The Sony’s HT-X8500 soundbar is a speaker system for producing localized regions of sound.</p> <p>For example, the Sony’s HT-X8500 soundbar produces a surround sound effect. The surround sound effect causes a listener facing the soundbar to perceive that sound emanating from the soundbar is originating at a location behind and to the left of the listener, referred to as surround left, and at another location behind and to the right of the listener, referred to as surround right.</p> <div data-bbox="892 657 1533 1245" data-label="Image"> <p><b>Surround made simple</b></p> <p>Using front speakers only, Sony’s unique digital-sound-field-processing technology virtually reproduces the surround sound field, with audio coming at you from both sides. There’s no need to add rear speakers, meaning you can enjoy rich, cinematic surround sound without cluttering your living space.</p> <p>Thanks to Sony’s virtual-surround technology, the soundbar can position sound in vertical space—so you can experience 3D audio without the need for in-ceiling or up-firing speakers. As well as Dolby Atmos and DTS:X, Vertical Surround Engine lends a more realistic, multidimensional sound to other formats too.</p> </div> <p>Source: <a href="https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500">https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500</a></p> |

|  |   |
|--|---|
| <p>a multiplicity of audio frequency speakers;</p>   | <p>The Sony's HT-X8500 soundbar includes a multiplicity of audio frequency speakers.</p> <p>For example, the Sony's HT-X8500 soundbar includes multiple audio speakers positioned along a front face of the soundbar.</p> <div data-bbox="552 418 1879 673" style="border: 1px solid green; padding: 10px; margin: 10px 0;"> <p>Vertical Surround Engine, our latest surround technology, lets you enjoy the thrill of Dolby Atmos® and DTS:X® from a single slim unit. No matter what type of room you're in, <u>advanced DSP technology allows just two front speakers to reproduce full, cinematic sound from all around you, including from above.</u></p> </div> <p>Source: <a href="https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500">https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500</a></p>  |
| <p>at least one defined sound target spaced from each of the speakers of the multiplicity of speakers, wherein each speaker has a means for applying a time varying audio drive voltage which is</p> | <p>The Sony's HT-X8500 soundbar has at least one defined sound target spaced from each of the speakers of the multiplicity of speakers. Each speaker has a means for applying a time varying audio drive voltage which is substantially identical, except that each audio drive voltage is offset in time by an amount which is related to the distance between each speaker and the defined sound target. So that substantially identical sound from each speaker reaches the sound target at the same time.</p> <p>For example, each of the Sony's HT-X8500 soundbar speakers is connected to an audio amplifier. A surround left channel signal is provided to each speaker via the speaker's respective amplifier. The surround left channel is delayed slightly for speakers on the listener's left compared to speakers on the listener's right. The amount of delay is such that sound waves emanating from each of the speakers reach the surround left location at the same time, thereby interfering constructively to produce a resultant sound wave having peak spatial amplitude at the surround left location. When this wave reflects back</p> |

substantially identical, except that each audio drive voltage is offset in time by an amount which is related to the distance between each speaker and the defined sound target, so that substantially identical sound from each speaker reaches the sound target at the same time;

to the listener, the listener perceives that the sound originated from the surround left location.



### Surround made simple

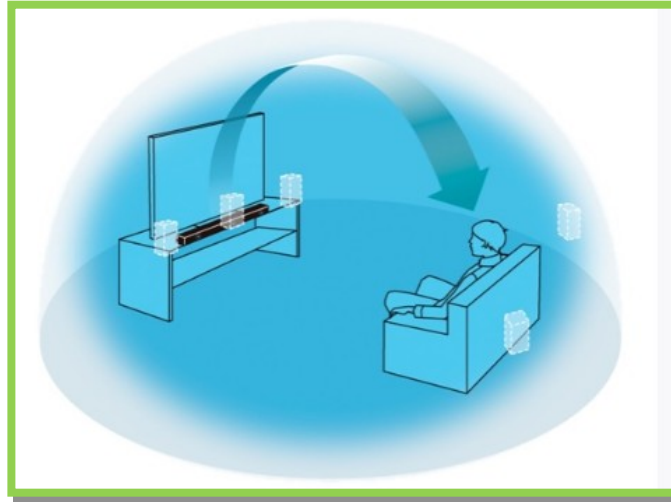
Using front speakers only, Sony's unique digital-sound-field-processing technology virtually reproduces the surround sound field, with audio coming at you from both sides. There's no need to add rear speakers, meaning you can enjoy rich, cinematic surround sound without cluttering your living space.

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|--|--|
|  | <ul style="list-style-type: none"> <li>• <u>7.1.2ch Dolby Atmos/DTS:X with Vertical Sound Engine<sup>1</sup></u></li> <li>• <u>Dual built-in subwoofers for deep bass</u></li> <li>• <u>All sound upscaled close to 7.1.2ch audio</u></li> <li>• <u>Seven different sound modes to enhance your entertainment experience</u></li> </ul> <p>Source: <a href="https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500">https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500</a></p>   |
| <p>at least a first defined sound target and a second defined sound target, the second sound target being spaced from the first sound target, and the first sound target and the second sound target being spaced from each of the speakers of the multiplicity of</p> | <p>The Sony's HT-X8500 soundbar has at least a first defined sound target and a second defined sound target. The second sound target is spaced from the first sound target. The first sound target and the second sound target are spaced from each of the speakers.</p> <p>For example, the surround left location is at a rear position on a left-side wall of a nominally sized room. The surround right location is at a rear position on the right-side wall of the room. Additionally, the DSP technology feature enables the Sony's HT-X8500 soundbar to adapt to the dimensions of the room.</p> <p>Vertical Surround Engine, our latest surround technology, lets you enjoy the thrill of Dolby Atmos® and DTS:X® from a single slim unit. No matter what type of room you're in, <u>advanced DSP technology allows just two front speakers to reproduce full, cinematic sound from all around you, including from above.</u></p> |

speakers,

- 7.1.2ch Dolby Atmos/DTS:X with Vertical Sound Engine<sup>1</sup>
- Dual built-in subwoofers for deep bass
- All sound upscaled close to 7.1.2ch audio
- Seven different sound modes to enhance your entertainment experience





Source: <https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500>

and wherein the means for applying a time varying audio drive voltage comprises:  
at least a first audio source which is offset in time by an amount which is related to the distance

The means for applying a time varying audio drive voltage comprises at least a first audio source which is offset in time by an amount which is related to the distance between each speaker and the first defined sound target.

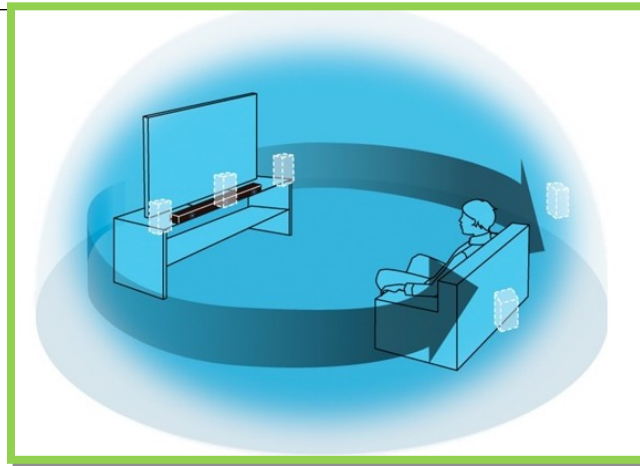
For example, a delay is added to the surround left channel (e.g. first audio source) before it is applied to a speaker on the left-side of the soundbar, as viewed from the listener's position. The delay relates to the distance between the speaker and the surround left location in the nominally sized room, whereby the speaker closest to the surround left location has the most delay. This enables the soundbar to produce directional audio.



|   |   |
|---|---|
| <p>between each speaker and the first defined sound target; and</p>   | <div data-bbox="821 233 1612 532" data-label="Image"> <p><u>Thanks to Sony's virtual-surround technology, the soundbar can position sound in vertical space—so you can experience 3D audio without the need for in-ceiling or up-firing speakers. As well as Dolby Atmos and DTS:X, Vertical Surround Engine lends a more realistic, multidimensional sound to other formats too.</u></p> </div> <p>Source: <a href="https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500">https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500</a></p>   |
| <p>at least a second audio source which is offset in time by an amount which is related to the distance between each speaker and the second defined sound target wherein a sum of the first audio source which is offset in time and the second audio source which is offset in time is used to produce the</p> | <p>The Sony's HT-X8500 soundbar includes at least a second audio source which is offset in time by an amount which is related to the distance between each speaker and the second defined sound target. The sum of the first audio source and the second audio source is used to produce the time varying audio drive voltage. Substantially identical sound from the first audio source signal reaches the first sound target at the same time, and substantially identical sound from the second audio source signal reaches the second target at the same time.</p> <p>For example, a delay is added to the surround right channel (e.g. second audio source) before it is applied to a speaker on the right-side of the soundbar. The delay relates to the distance between the speaker and the surround right location, whereby the speaker closest to the surround right location has the most delay. Each speaker is provided, via its amplifier, with a surround left channel signal and a surround right channel signal, each signal having a respective delay. The signals are added together before being input to the respective amplifier. Consequently, each speaker emits a sound wave comprising audio from the surround left channel and from the surround right channel, the audio from each channel having an appropriate amount of delay such that the surround left audio reaches the surround left location at the same time as the surround right audio reaches the surround right location.</p> |



time varying audio drive voltage so that substantially identical sound from the first audio source signal reaches the first sound target at the same time, and substantially identical sound from the second audio source signal reaches the second target at the same time.



Source: <https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500>

### **Accused Product List**

HT-A9 High Performance Home Theater System  
HT-A7000 7.1.2ch Dolby Atmos® Soundbar  
HT-A5000 5.1.2ch Dolby Atmos® Soundbar  
HT-A3000 3.1ch Dolby Atmos® Soundbar  
HT-S2000 3.1ch Dolby Atmos® Soundbar  
HT-G700 3.1ch Dolby Atmos® / DTS:X® Soundbar  
HT-S400 2.1ch Soundbar with Wireless subwoofer  
HT-X8500 2.1ch Dolby Atmos®/DTS:X® Soundbar with built-in subwoofer  
HT-S40R 5.1ch Home Cinema Soundbar System  
HT-S100F 2ch Built-in Tweeter Soundbar  
SA-SW5 300W Wireless Subwoofer for HT-A9/HT-A7000/HT-A5000/HT-A3000/HT-S2000  
SA-SW3 200W Wireless Subwoofer for HT-A9/HT-A7000/HT-A5000/HT-A3000/HT-S2000  
SA-RS5 Wireless Rear Speakers with Built-in Battery for HT-A7000/HT-A5000/HT-A3000  
SA-RS3S Wireless Rear Speakers for HT-A7000/HT-A5000/HT-A3000  
NS7 Wireless Wearable TV Speaker  
SA-Z9R Wireless Rear Speakers for HT-Z9F  
HT-S200F 2.1ch Built-in Subwoofer Mini Soundbar  
HT-MT300 2.1ch Compact Soundbar with Bluetooth®  
HT-Z9F 3.1ch Dolby Atmos® / DTS:X® Soundbar  
HT-S350 2.1ch Soundbar with Wireless Subwoofer

### **References**

- [1] HT-A9 High Performance Home Theater System  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hta9>
- [2] HT-A7000 7.1.2ch Dolby Atmos® Soundbar  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hta7000>

[3] HT-A5000 5.1.2ch Dolby Atmos® Soundbar

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hta5000>

[4] HT-A3000 3.1ch Dolby Atmos® Soundbar

<https://electronics.sony.com/audio/soundbars/a-series-soundbars/p/hta3000>

[5] HT-S2000 3.1ch Dolby Atmos® Soundbar

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hts2000-uc2>

[6] HT-G700 3.1ch Dolby Atmos® / DTS:X® Soundbar

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/htg700>

[7] HT-S400 2.1ch Soundbar with Wireless subwoofer

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hts400>

[8] HT-X8500 2.1ch Dolby Atmos®/DTS:X® Soundbar with built-in subwoofer

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/htx8500>

[9] HT-S40R 5.1ch Home Cinema Soundbar System

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hts40r>

[10] HT-S100F 2ch Built-in Tweeter Soundbar

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hts100f>

[11] SA-SW5 300W Wireless Subwoofer for HT-A9/HT-A7000/HT-A5000/HT-A3000/HT-S2000

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/sasw5>

[12] SA-SW3 200W Wireless Subwoofer for HT-A9/HT-A7000/HT-A5000/HT-A3000/HT-S2000

<https://electronics.sony.com/audio/soundbars/all-soundbars/p/sasw3>

[13] SA-RS5 Wireless Rear Speakers with Built-in Battery for HT-A7000/HT-A5000/HT-A3000  
<https://electronics.sony.com/audio/soundbars/a-series-soundbars/p/sars5>

[14] SA-RS3S Wireless Rear Speakers for HT-A7000/HT-A5000/HT-A3000  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/sars3s>

[15] NS7 Wireless Wearable TV Speaker  
<https://electronics.sony.com/audio/speakers/wearable-speakers/p/srsns7>

[16] SA-Z9R Wireless Rear Speakers for HT-Z9F  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/saz9r>

[17] HT-S200F 2.1ch Built-in Subwoofer Mini Soundbar  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hts200f>

[18] HT-MT300 2.1ch Compact Soundbar with Bluetooth®  
<https://electronics.sony.com/tv-video/tv-video-home-theater-sound-bars/soundbars/p/htmt300-w>

[19] HT-Z9F 3.1ch Dolby Atmos® / DTS:X® Soundbar  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/htz9f>

[20] HT-S350 2.1ch Soundbar with Wireless Subwoofer  
<https://electronics.sony.com/audio/soundbars/all-soundbars/p/hts350>